

REMARKS

1. This amendment is being submitted under Rule 116 to place the application in condition for allowance or at least in improved condition for appeal. Accordingly, applicant respectfully requests the Examiner to enter the proposed amendment.

2. Claims 1 - 13, 18 - 30, 32 - 80, 82 - 113, 122 - 128, 146 - 149, 152 - 154, 156 and 158 - 164 have been retained in the application. A number of the claims have been amended to correct informalities noted by applicant's attorney upon a further study of the claims. A number of the claims have been amended to provide a sharp distinction over the references cited by the Examiner. As now written, all of the claims are believed to be definite and to be allowable for certain important reasons over the cited references.

3. Claims 61 , 62, 146 and 147 have been rejected under 35 U.S.C. 1029b) as being anticipated by Rosenhagen. All of these claims are allowable over Rosenhagen for certain important reasons.

Claim 61 is allowable over Rosenhagen for certain important reasons. Rosenhagen does not disclose second means in a vehicle for determining whether at least a particular percentage of successive packets addressed to the vehicle during a particular period of time has a particular number of second signals in the packets. There is also no

disclosure in Rosenhagen of third means in the vehicle for operating the vehicle in accordance with the second signals in the packets addressed to such vehicle when the second means in such vehicle determines that at least the particular percentage of the packets addressed to such vehicle during the particular period of time has the second particular number of the second signals in the packets. Claim 62 is allowable over Rosenhagen for the same reasons as claim 61 since it is dependent from claim 61.

Claim 146 is allowable over Rosenhagen for certain important reasons. For example, claim 146 recites means in the receiving means for providing pulse width modulations for energizing the motors in the vehicle to move the vehicle, the pulse width modulations providing progressive increments of time for energizing the motors to accelerate the vehicle. There is also a recitation in claim 146 of means in the receiving means for progressively energizing the motors with the pulse width modulations for the progressive increments of time to accelerate the motors. These features are not disclosed in Rosenhagen.

Although Rosenhagen recites pulse width modulations, they are produced for a different purpose than what is recited in claim 146. As disclosed by Rosenhagen in column 14, line 60, to page 15, line 7, the pulse width modulations are produced as a result of errors in steering between a desired value and an actual value. The pulse widths of the modulations are variable depending upon the magnitude of the error. If there is no error, a

braking signal is produced in Rosenhagen to prevent any changes in steering. This is not the same as in applicant's system where the width of the pulse width modulations is increased to accelerate the motors for increasing the speed of movement of the vehicle. This is recited in claim 146.

Since claim 147 is dependent from claim 146, it is allowable over Rosenhagen for the same reasons as claim 146. Claim 147 is also allowable over Rosenhagen because it recites that the vehicle is progressively energized with the pulse width modulations for the progressive increments of time from a zero time in the pulse width modulations to accelerate the motors in the vehicle.

4. Claims 23 - 27, 107, 155, 157 and 159 - 161 have been rejected under 35 U.S.C. 1039a) as being unpatentable over Rosenhagen in view of Stern. According to the Examiner at the top of page 3 of the Office Action dated April 29, 1999:

"Rosenhagen lacks a central station, such as is taught by Stern.

It would have been obvious to one of ordinary skill in the art to have provided a Rosenhagen set with a central station, as taught by stern [sic], in order to only require one transmitter, thereby saving on electronic costs."

When a vehicle in applicant's system fails to receive a command for a particular period of time from a pad addressing the vehicle or when the pad addressing the vehicle in applicant's system addresses another vehicle, the vehicle is released from the addressing pad and is available thereafter to be addressed by any of the pads including the addressing pad. When the vehicle is released from being addressed by the pad addressing the vehicle or when the pad addresses another vehicle, the vehicle does not expend energy. This is different from Rosenhagen. As indicated by Rosenhagen in column 10, lines 24 - 32:

"If a vehicle fails to receive a properly decodeable command signal in a predetermined period of time, suitably from about 0.5 to about 1.5 seconds, command decoder 18 produces a braking signal which brings toy vehicle 8 to a stop awaiting the receipt of a new command signal. This avoids toy vehicle 8 running away and becoming lost or damaged when the control signal is lost due to distance, malfunction or turning off control set 6."

Thus, in Rosenhagen, the toy vehicle is still addressed by the control set 6 previously addressing the toy vehicle. This prevents the toy vehicle 8 from being addressed by any of the other control sets. Furthermore, the toy vehicle 8 is expending energy in braking the vehicle.

Stern also cannot address a vehicle such as the vehicle 20 from any one of the control units 26. This results from the fact that the multi-channel FM telemetry oscillator and mixer 38 receives signals representing an operation of a steering control 30 in each individual one of the control units 26. The multi-channel unit 38 converts the operation of the steering control 30 for each control unit 26 into control signals of an individual frequency tuned to an individual one of the vehicles on the track. Thus, each of the control units 26 in Stern can control the operation of only an individual one of the vehicles and cannot control the operation of any of the other vehicles.

In applicant's system, only one central station is provided. This central station transmits signals at the same frequency to all of the vehicles. The signals intended for each vehicle have a different binary address from the signals intended for the other vehicles. The signals are transmitted on a sequential basis by the central station to the different vehicles.

Stern does not provide a single central station. Stern provides a plurality of central stations each operating at an individual frequency to control the operation of an individual one of the vehicles. This may be seen from the discussion by Stern in column 3, lines 46 - 59, where Stern designates the apparatus 38 as a "*multi-channel FM telemetry network*". Stern happens to house the plurality of central stations in a single box 38. But housing the plurality of central stations in a single box 38 does not convert the plurality of central stations into a single central station.

As will be seen from the above discussion, Rosenhagen cannot address a vehicle from any one of a plurality of control pads. Neither can Stern. On this basis, applicant does not see how a person of ordinary skill in the art can combine Rosenhagen and Stern to obtain a system in which any one of a plurality of pads, operating through a single central station, controls the operation of any addressed one of a plurality of vehicles. Furthermore, a person of ordinary skill in the art cannot combine Rosenhagen and Stern to produce a system in which any one of a plurality of pads can control the operation of a vehicle.

Claim 23 recites a plurality of pads each operative to provide an address for selecting any individual one of a plurality of vehicles and to provide commands to such individual one of the vehicles for operating such individual one of the vehicles in accordance with such commands. As described in the immediately preceding paragraphs, neither Rosenhagen nor Stern has a plurality of pads each operative to provide an address for selecting any individual one of a plurality of vehicles.

Claim 23 is also allowable over the combination of Rosenhagen and Stern for several additional and important reasons. Neither Rosenhagen nor Stern discloses a central station. Furthermore, neither Rosenhagen nor Stern discloses first means in the central station for interrogating the pads to determine the address and commands provided by the pads. There is also no disclosure in either Rosenhagen or Stern of second means responsive in the central station to the interrogation by the first means of each pad for sending the

address and commands from the pad to the vehicle addressed by the pad to obtain an operation of such vehicle in accordance with such commands. No disclosure is further provided in either Rosenhagen or Stern that the first means in the central station is operative to interrogate any additional pad connected to the central station at the instant that such additional pad is connected to the central station. Neither Rosenhagen nor Stern additionally discloses that the second means is responsive in the central station to the interrogation provided by the first means in the central station to send signals representing the address and commands from each of the pads in the plurality and the additional pad to the vehicle addressed by such pad, instantaneously after the additional pad is connected to the central station, to obtain an operation of such vehicle in accordance with such commands without affecting the interrogation of the pads in the plurality by the central station.

Claims 24 and 25 are dependent from claim 23 and are accordingly allowable over the combination of Rosenhagen and Stern for the same reasons as claim 23. Claim 24 is additionally allowable over the combination of Rosenhagen and Stern because neither reference discloses third means in the central station for providing for the sending at each instant by the second means of only the commands from the pads which are providing changes in addresses or commands at that instant. Claim 25 recites that the first means is operative to eliminate from interrogation by the central station of any one of the pads disconnected in the plurality from the central station and to provide such elimination at the instant that the pad is disconnected from the central station and without affecting the

interrogation of the other pads by the central station and to provide for the addressing by any of the pads, other than the disconnected pad, of the vehicle previously addressed by the disconnected pad.

Claim 26 is allowable over the combination of Rosenhagen and Stern for substantially the same reasons as discussed above in connection with claim 23. However, claim 26 deals with the disconnection of one of the pads in a plurality from a central station without affecting the interrogation of the other pads in the plurality by the central station. Neither Rosenhagen nor Stern deals with such a situation.

Since claim 27 is dependent from claim 26, it is allowable over the combination of Rosenhagen and Stern for the same reasons as claim 26. Claim 27 is also allowable over the combination of Rosenhagen and Stern because of the recitation of third means in the central station for providing for the transmission at each instant by the second means only of the commands from the pads which are providing changes in addresses or commands at that instant.

Because of its dependency from claim 23, claim 107 is allowable over the combination of Rosenhagen and Stern for the same reasons as claim 23. Claim 107 is also allowable over the combination of Rosenhagen and Stern because Rosenhagen and Stern do

not interrogate the pads. Since they do not interrogate the pads, they cannot interrogate the pads in the plurality and the additional pad simultaneously.

Claim 155 is allowable over the combination of Rosenhagen and Stern for certain important reasons. Neither reference discloses a central station. Furthermore, neither reference discloses a plurality of pads each operatively connected to the central station and each operative to provide addresses individual to any one of such vehicles and to provide commands for operating such vehicle. There is also disclosure in either Rosenhagen or Stern that each of the pads includes a switch actuatable a number of times to select any one of the vehicles, the particular number of times being dependent upon the particular one of the vehicles addressed by the pad. No disclosure is further provided in either of Rosenhagen or Stern of memory means in the central station for remembering each of the vehicles addressed at each instant and the pad addressing the vehicle. Neither of the references further discloses means in the central station for preventing each of the pads from addressing one of the vehicles already being addressed by another one of the pads.

Claim 157 recites a central station. It also recites that each of the pads in a plurality has a first member actuatable a sequential number of times to address any one of the vehicles dependent upon the number of actuations. The claim also recites the interrogation of the pads by the central station to determine the number of actuations of the first member in each of the pads. A recitation is also made in the claim of means in the

central station for remembering each pad and the vehicle selected by the pad and for providing for the transmittal of such information to the pads. There is also a recitation in claim 157 of means responsive in the pads to the remembered information transmitted to the pads from the central station for skipping in each pad the binary indications of vehicles already being addressed by others of the pads when the first member in the pad is actuated the sequential number of times. None of the features specified in this paragraph is disclosed in either Rosenhagen or Stern.

Claim 159 recites that each individual one of the pads in a plurality includes switches for providing an address to select any individual one of a plurality of vehicles. There is also a recitation in the claim of a central station and that the pads are connected to the central station for interrogation simultaneously by the central station concerning the states of operation of the switches in the pads. The claim also recites that the pads sends switch information to the central station in response to the simultaneous interrogation of the pads by the central station. These features are not disclosed in either Rosenhagen or Stern.

Because of their dependency from claim 159, claims 16 and 161 are allowable over the combination of Rosenhagen and Stern for the same reasons as claim 159. Claim 160 is additionally allowable over the combination of Rosenhagen and Stern because neither reference discloses that the first means is responsive to the simultaneous interrogations by the central station of the states of operation of the switches in the pads for transmitting to the

central station the binary indications of the states of closure of the switches. Claim 161 is additionally allowable over the combination of Rosenhagen and Stern because of the recitation that the second means is responsive in the central station to the simultaneous transmission of the binary indications to the central station for transmitting to the vehicles in sequence the signals representing such binary indications.

5. Claims 28, 29, 36 - 39, 43 - 56, 92 - 95, 100, 103, 108 - 110, 122, 123, 126, 127 and 154 ~~have been rejected under 35 U.S.C.(a) as being unpatentable over Yavetz in~~ view of Stern. As will be seen from the discussion below, claims 28, 29, 36 - 39, 43 - 56, 92 - 95, 100, 103, 108 - 110, 122, 123, 126, 127 and 154 are allowable for certain important reasons over the combination of Yavetz and Stern.

As the Examiner has admitted, Yavetz does not disclose a central station. Neither does Stern as discussed in detail in paragraph 4 since Stern discloses a plurality of central stations, each having a different frequency, disposed within a single housing. On this basis, a person of ordinary skill in the art could not combine Yavetz and Stern to provide a system with a central station such as the central station provided by applicant. Except possibly for claims 43 - 45, all of the claims rejected on the combination of Yavetz and Stern recite a central station as a positive element in the claims and further recite the relationship between the central station and a pad or a plurality of pads where each pad operates through the

central station to select any individual one of a plurality of vehicles. This is not disclosed in either Yavetz or Stern.

Applicant filed an Information Disclosure Statement in this application on or about May 7, 1998. The record indicates that the Examiner considered the prior art references in the Information Disclosure Statement on June 30, 1998. One of the prior art references listed in the Information Disclosure Statement is Nakada patent 5,452,401 issued on September 26, 1995. Nakada may be considered to disclose a central station in two (2) of the three (3) embodiments disclosed in his patent. In the embodiment shown in Figure 4, Nakada provides a plurality of passive toy units 1a, 1b, etc., a plurality of transmitters 3a, 3b, etc. and a synchronizing signal transmitting means 5 which may be considered to constitute a central station. The signal transmitting means 5 generates a synchronizing signal for synchronizing the operation of the transmitters 3a, 3b, etc. and actuates a light transmitting element 21 to transmit a synchronizing signal of an infra red beam to the toy units 1a, 1b, etc. Each of the transmitters 3a, 3b, etc. transmits signals to one of the toy units 1a, 1b, etc. in synchronism with one of the synchronizing signals. One of the toy units 1a, 1b, etc. responds to the signal from the energized one of the transmitters 3a, 3b, etc. and the synchronizing signal from the synchronizing means 5.

In the embodiment shown in Figure 5 of Nakada, one (e.g. 3a) of the transmitters 3a, 3b, etc. is provided with a synchronizing signal transmitting means (e.g. the means 5 of

Figure 4). The synchronizing signal transmitting means in this transmitter (e.g. 3a) is connected to the other transmitters (e.g. 3, 3b, etc.). It performs the same functions as the signal transmitting means 5 in the embodiment of Figure 4.

Thus, as late as September, 1995, Nakada provided a central station but not a central station of the type disclosed and claimed by applicant. The central station disclosed by Nakada was not as straight forward or advantageous as that provided by applicant since applicant's central station receives information from the pads and communicates this information directly to the vehicles or accessories. In this way, applicant's central station eliminates many of the duplications which exist in the pads when the pads communicate directly with the vehicles. For example, since applicant's central station provides power to the pads, applicant's central station eliminates the need for providing power from individual power sources to each of the pads.

The Nakada patent issued after Stern and Yavetz. It was not obvious to Nakada, a person skilled in the art, to combine Stern and Yavetz to obtain the advantages of applicant's invention. If it was not obvious to Nakada, a skilled person, to do so, how would it be obvious to a person of ordinary skill in the art to do so?

There is another significant difference between applicant's invention and Nakada. The central station in Nakada does not interrogate the pads to determine the operation of the

switches in the pads and the central station does not transmit to the vehicles signals based upon the interrogation of the pads. This is recited in claims 28, 29, 36 - 39, 46 - 56, 92 - 95, 100, 103, 108 - 110, 122, 123, 126, 127 and 154. These claims are distinguished over each of Yavetz and Stern for the same reasons as discussed in this paragraph as they are distinguished over Nakada.

There are in the prior art a number of references which disclose systems with a multiple number of transmitters and a multiple number of receivers. These include the following in addition to the references cited by applicant in the Information Disclosure Statement filed by applicant in the USPTO:

Hughson patent 3,482,046

Wrege patent 3,639,755

Simonelli patent 4,817,940

The system disclosed in these patents would have benefitted significantly from the inclusion of a central station. The failure of Nakada and the references cited in this paragraph to include a central station of applicant's type in these systems shows that it was not obvious to a person of ordinary skill in the art to provide a central station of the type disclosed and claimed by applicant.

Applicant notes that the Hughson patent issued in 1969. This shows that the unobviousness of a person of ordinary skill in the art to provide a central station of the type disclosed and claimed by applicant has existed for a period of approximately thirty (30) years. In that period, no one has provided a central station of the type disclosed and claimed by applicant. This unobviousness continued into the year 1995 when the Nakada patent issued. Surely the existence of an unobviousness for a period of thirty (30) years negates any argument that the inclusion of a central station of the type disclosed and claimed by applicant would have been obvious to a person of ordinary skill in the art.

Claims 28 and 29 recite a switch operative to provide an address to any individual one of the vehicles dependent upon the number of the operations of the switch in a particular one of the first and second states. The Examiner appears to concede that none of the references including Yavetz and Stern discloses this. The Examiner appears to consider this, on page 3 of the Office Action dated April 29, 1999, *"an obvious choice of design well within the skill of one of ordinary skill in the art"*. The Examiner has cited scores of prior art references including the prior art references cited in the Information Disclosure Statement. None of these references discloses a single switch, such as recited by applicant, for addressing individual ones of a plurality of vehicles. Since none of these references discloses such a single switch, applicant respectfully submits that it would not have been obvious to provide such a switch in a system such as disclosed and claimed by applicant.

In addition to the reasons specified above in this paragraph 5 for the allowability of the claims over the combination of Yavetz and Stern, claims 28, 29, 36 - 39, 46 - 56, 92 - 95, 100, 103, 108 - 110, 122, 123, 126, 127 and 154 are individually allowable over the combination of Yavetz and Stern because neither reference discloses the following:

Claim 28 - There is no disclosure in either reference of means responsive in the central station to the operations in the second state of the second switches providing in a pair of the pads contradictory commands to the individual one of the vehicles for converting such contradictory commands to signals providing specialized commands different from the commands provided by the operation of the different ones of the second switches in such pads.

Claim 29 - Neither reference discloses the features specified above in claim 28. Neither reference further discloses means in the central station for providing at each instant only the commands from the pads which are providing changes in addresses or commands at that instant. There is also no disclosure in either reference of means in the central station for sending to the vehicles in the plurality only the commands provided by the last mentioned means in the central station.

Claim 36 - There is no disclosure in either reference of second means responsive in each vehicle to the same identity of the signals providing the commands in two (2) successive packets addressed to such vehicle by the first means in the central station for operating such vehicle in accordance with the patterns of the signals in such packets.

Claims 37 and 38 - Because of their dependency from claim 36, claims 37 and 38 are allowable over the combination of Yavetz and Stern for the same reasons as claim 36. Furthermore, as described above, claim 37 recites that the central station interrogates the pads. Claim 38 additionally recites means in the central station for transmitting to the vehicles at each instant only the binary indications from the pads which are providing changes in addresses or commands at that instant. These features are not disclosed in either Yavetz or Stern.

Claim 46 - Neither Yavetz nor Stern discloses means operative in each of the vehicles for continuing to provide a movement of such vehicle for a particular period of time in accordance with the last commands addressed to such vehicle by the central station when the vehicle fails to receive any commands addressed to such vehicle during

such particular period of time. Neither reference additionally discloses means operative in each of the vehicles for converting the vehicle from the powered and active state to the powered and inactive state at the end of the particular period of time when such vehicle fails to receive any commands addressed to such vehicle during such particular period of time.

Claim 47 - Claim 47 is allowable over the combination of Yavetz and Stern for the same reasons as claim 46 because of its dependency from claim 46. Claim 47 also recites means in each of the vehicles for providing for a change in such vehicle from the inactive but powered state at the end of a second particular period of time when such vehicle fails to receive any commands addressed to such vehicle from the central station for any of the vehicles during such second particular period of time.

Claim 48 - Claim 48 is allowable over the combination of Yavetz and Stern for the same reasons as claim 46 since it is dependent from claim 46. Claim 48 additionally recites means responsive in each of the vehicles to the commands addressed to the vehicle relating to movements of the vehicle at a particular speed for accelerating the

vehicle in progressive increments to the particular speed. This is not disclosed in either Yavetz or Stern.

Claim 49 - Neither Yavetz nor Stern discloses second means responsive in each of the vehicles to the second and third signals received by the vehicle from the central station for accelerating the first and second motors in progressive increments to the speeds commanded by the central station to such motors for movement of such vehicle in the longitudinal direction.

Claim 50 - Claim 50 is dependent from claim 49 and is accordingly allowable over the combination of Yavetz and Stern for the same reasons as claim 49. Claim 50 also recites third means responsive in each of the vehicles to the second and third signals received by such vehicle from the central station for movement of such vehicle in the longitudinal direction for operating the first and second motors at the same speed, without any progressive increments in speed, when one of the motors in such vehicle has been previously operated at a different speed than the other motor in such vehicle, the same speed constituting the higher of the speeds provided by the first and second motors in such vehicle.

Claim 51 - Since claim 51 is dependent from claim 50, it is allowable over the combination of references for the same reasons as claim 50. Claim 51 additionally recites means operative in each of the vehicles for continuing to operate the first and second motors for a particular period of time in accordance with the last ones of the second and third signals received by such vehicle from the central station when such vehicle fails to receive the second and third signals addressed to such vehicle during such particular period of time.

Claim 52 - Neither Yavetz nor Stern discloses second means responsive in each of the vehicles to the second signals addressed to such vehicle for determining whether successive ones of such vehicle for determining whether successive ones of the second signals addressed to such vehicle are identical and third means in each of the vehicles for operating such vehicle in accordance with the second signals addressed to such vehicle when the second means in such vehicle determines that the successive ones of the second signals addressed to such vehicle are identical.

Claim 53 - Claim 53 is dependent from claim 52 and is accordingly allowable over the combination of Yavetz and Stern for the

same reasons as claim 52. There is an additional recitation in claim 53 that the third means in each of the vehicles is operative to operate such vehicle in accordance with the second signals addressed to such vehicle in the second of the successive ones of the second signals addressed to such vehicle when the second means in such vehicle determines that the successive ones of the second signals addressed to such vehicle are identical. This is not disclosed by either Yavetz or Ster.

Claim 54 - Because of its dependency from claim 52, claim 54 is allowable over the combination of Yavetz and Stern for the same reasons as claim 52. Claim 54 additionally recites fourth means for determining whether at least a particular percentage of the successive packets addressed to each of the vehicles has the first particular number of the first signals and the second particular number of the second signals during a particular period of time. There is also a recitation in claim 54 of fifth means for operating each of the vehicles in accordance with the second signals in the successive packets addressed to such vehicle when the fourth means in such vehicle determines that at least the particular percentage of the packets addressed to such vehicle during the particular period of time has the first particular number of the first signals and the second particular number of the second signals

in the packets.

Claim 55 - A recitation is made in claim 55 of second means for determining whether at least a particular percentage of the packets addressed to each of the vehicles during a particular period of time has the first particular number of the second signals in each packet. There is also a recitation in the claim of third means for operating each of the vehicles in accordance with the second signals in the successive packets addressed to such vehicle when the second means in each vehicle determines that at least the particular percentage of the packets addressed to such vehicle during the particular period of time has the second particular number of the second signals in the packets.

Claim 56 - Since claim 56 is dependent from claim 55, it is allowable over the combination of Yavetz and Stern for the same reasons as claim 55. Furthermore, in addition to the recitation of the interrogation of the pads by the central station, claim 56 recites means in the central station for sending to the vehicles at each instant only the binary indications representing changes in the addresses or commands from the pad at that instant.

Claim 92 - The central station and the pads are constructed to provide for the connection of an additional pad to the central station. The first means in the central station are operative to interrogate the pads in the plurality and the additional pad instantaneously after the connection of the additional pad to the central station. The second means in the pad is operative to transmit the first and second binary indications from the pads in the plurality and the additional pad to the central station instantaneously after the connection of the additional pad to the central station. The third means in the central station is operative to transmit signals representing the first and second binary indications from the pads in the plurality and the additional pad to the vehicles in the plurality instantaneously after the connection of the additional pad to the central station. These features are not disclosed in either Yavetz or Stern.

Claims 93 and 94 - claims 93 and 94 are allowable over the combination of Yavetz and Stern for the same reasons as claim 92 because of their dependency from claim 92. Claim 93 additionally recites that the first means are operative to interrogate the pads in the plurality before the connection of the additional pad to the central station and to interrogate the pads in the plurality and the additional

pad instantaneously after the connection of the additional pad to the central station. Claim 93 additionally recites that the interrogation of the pads is on a cyclic basis. Claim 94 additionally recites that the interrogation of the pads in the plurality is simultaneous before the connection of the additional pad to the central station and that the interrogation of the pads in the plurality and the additional pad is simultaneous after the connection of the additional pad to the central station.

Claim 95 - Since claim 95 is dependent from claim 92, it is allowable over the combination of Yavetz and Stern for the same reasons as claim 92. Claim 95 additionally recites that the fifth means in the central station is operative to continue the illumination of the vehicles addressed by the pads in the plurality and to provide an illumination of the vehicle addressed by the additional pad immediately after the additional pad is connected to the central station.

Claim 100 - There is a recitation in claim 100 of fourth means in the central station for providing a transmittal by the second means at each instant only of the second binary indications from the pads which are providing changes in address or commands at that instant.

Claim 103 - Claim 103 is dependent from claim 100 and is accordingly allowable over the combination of Yavetz and Stern for the same reasons as claim 100. Claim 103 also recites that the first means in the central station is operative to simultaneously interrogate the pads to obtain simultaneously from the pads the first binary indications providing the addresses for the individual ones of the vehicles and the second binary indications providing the commands for operating the individual ones of the vehicles.

Claim 108 - There is no disclosure in either Yavetz or Stern of third means responsive in the central station to any change in the address or commands from an individual one of the pads for transmitting the address and the commands from such pad to the vehicle in the plurality on a priority basis relative to the address and commands from the other pads in the plurality.

Claim 109 - Because of its dependency from claim 108, claim 109 is allowable over the combination of Yavetz and Stern for the same reasons as claim 108. There is also a recitation in claim 109 that the central station discontinues an interrogation of any pad which is disconnected from the central station instantaneously after the pad is

disconnected from the central station. A recitation is also made in claim 109 that the central station provides for the addressing by any of the pads still connected to the central station of the vehicle previously addressed by the disconnected pad.

Claim 110 - Since claim 110 is dependent from claim 108, it is allowable over the combination of Yavetz and Stern for the same reasons as claim 108. Claim 110 additionally recites that the central station transmits the address and commands from the individual one of the pads in the plurality to the vehicles in the vehicles in the plurality only when the central station has completed the transmission to the vehicles in the plurality of the address and commands of the pad whose address and commands the central station has been transmitting at the time that the central station receives the change in the address and the commands from the individual one of the pads in the plurality.

Claim 122 - There is a recitation in claim 122 of fourth means in the central station for transmitting to the vehicles in the plurality only the address and commands transmitted from each pad to the central station that are different from the immediately preceding address or commands transmitted from such pad to the central station.

Claim 123 - Since claim 123 is dependent from claim 122, it is allowable over the combination of Yavetz and Stern for the same reasons as claim 122. An additional recitation is made in claim 123 that the first means in the central station is operative to interrogate the pads simultaneously and that the pads are operative to transmit the addresses and the commands from such pads to the central station when interrogated.

Claim 126 - Neither Yavetz nor Stern discloses that each individual one of the vehicles has a light for illumination when such vehicle is addressed and commanded by the central station as a result of the address and commands from an individual one of the pads. Neither reference additionally discloses first means in the central station for storing the addressing by each individual one of the pads of the individual one of the vehicles. There is also no disclosure in either reference of second means in the central station for communicating a command to the individual one of the vehicles to extinguish the light in such vehicle instantaneously after the individual one of the pads providing the address and the commands to such individual one of the vehicles becomes disconnected from the central station. No disclosure is further provided in either reference of third means in each individual

one of the vehicles for extinguishing the light in such individual one of the vehicles in accordance with the communication from the central station.

According to the Examiner in paragraph 6 of the Office Action, Yavetz provides in each vehicle lights indicating the identity of the vehicle. This is not true. It is true that Yavetz may be considered to provide an illumination of the vehicle. See column 7, lines 7 - 18, of the Yavetz specification. Yavetz provides this illumination in each vehicle every time that the LED 112 in the vehicle is activated by an electromagnetic signal fired by another vehicle to indicate a fire command signal from the controller 12. (Yavetz Abstract lines 13 - 17 and page 7, lines 7 - 37 of the Yavetz specification). However, this illumination in Yavetz does not identify the vehicle. Furthermore, the illumination occurs only at isolated instances and it does not occur when the vehicle is addressed. It would have been desirable in Yavetz to provide a visual indication identifying the vehicle being addressed at each instant, but Yavetz does not do so. Thus, Yavetz does not provide on each vehicle a light for indicating when such vehicle is addressed and commanded.

Yavetz should be considered as a person skilled in the art. The advantage of providing an illumination identifying the addressed vehicle was not obvious to Yavetz even though Yavetz provided at isolated instances another type of illumination in each vehicle. It was not obvious to Stern who would be considered as a person skilled in the art. This would

indicate that it was not obvious to a person of ordinary skill in the art before applicant's invention to provide an illumination identifying the addressed vehicle. Claim 126 is accordingly allowable over the combination of Yavetz and Stern. This is particularly true since neither Yavetz nor Stern discloses a central station and neither Yavetz nor Stern extinguishes the light in a vehicle after the pad addressing the vehicle becomes disconnected from the central station.

Claim 127 - Because of its dependency from claim 126, claim 127 is allowable over the combination of Yavetz and Stern for the same reasons as claim 126. Claim 127 additionally recites fourth means in the central station for eliminating the storage of the addressing by each individual one of the pads of the individual one of the vehicles immediately after such individual one of the pads becomes disconnected from the central station.

Claim 154 - Since claim 154 is dependent from claim 108, it is allowable over the combination of Yavetz and Stern for the same reasons as claim 108. Claim 154 additionally recites that the central station initiates an interrogation of any pad which is connected to the central station, instantaneously after the pad is connected to the central station, to determine if the pad has addressed any one of the vehicles not then being addressed by any of the pads.

As previously indicated, claims 43 - 45 (unlike claims 28, 29, 36 - 39, 46 - 56, 92 - 95, 100, 103, 108 - 110, 122, 123, 126, 127 and 154) do not recite a central station in the body of the claims although the central station is recited in the preamble of the claims. Claims 43 - 45 (unlike claims 28, 29, 36 - 39, 46 - 56, 92 - 95, 100, 103, 108 - 110, 122, 123, 126, 127 and 154) also do not recite the interrogation of pads by the central station to determine the addressing and commands provided by the pads. However, claim 43 is allowable over the combination of Yavetz and Stern because neither reference discloses third means responsive in the vehicle to the failure of the vehicle in the powered and active state to receive the first and second signals for a particular period of time for maintaining the same operation of the first and second motors for such particular time period as the operation of the motors upon the last reception by the vehicle of the first and second signals from the central station. There is also a recitation in claim 43 of fourth means operative at the end of the particular time period for converting the operation of the vehicle from a powered and active state to a powered but inactive state when the vehicle fails to receive the first and second signals during the particular time period. Neither Yavetz nor Stern discloses such fourth means.

Claim 44 - Because of its dependency from claim 43, claim 44 is allowable over the combination of Yavetz and Stern for the same reasons as claim 43. A recitation is also made in claim 44 of fifth means responsive in the vehicle to the first and second signals received by the vehicle from the central station for accelerating the first and second motors

in progressive increments to the speeds commanded by the central station to such motors for movement of the vehicle in the longitudinal direction. There is also a recitation in claim 44 of sixth means operative at the end of a second particular time period for converting the operation of the vehicle from the powered but inactive state to a depowered state when the vehicle fails to receive the first and second signals from the central station for any of the pads in the plurality during the second particular time period.

Claim 45 - Claim 45 is dependent from claim 43 and is accordingly allowable over the combination of Yavetz and Stern for the same reasons as claim 43. Claim 45 also recites fifth means responsive in the vehicle to the first and second signals received by the vehicle from the central station for operating the first and second motors in accordance with such first and second signals only when the first means has received the same first and second signals from the central station a plurality of successive times.

6. Claims 156 and 158 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenhagen in view of Stern as applied to claim 155 and 157 and further in view of Yavetz. Each of claims 156 and 158 is allowable over the combination of Rosenhagen, Stern and Yavetz for certain important reasons.

Claim 156 is allowable over the combination of Rosenhagen, Stern and Yavetz for a number of reasons including the following:

- a. None of the references discloses a central station.
- b. Since none of the references discloses a central station, none of the references discloses that the central station receives addresses and commands from the pads.
- c. None of the references discloses means in the central station for transmitting the packets of the binary indications from each of the pads to the vehicles in the plurality.
- d. There is no disclosure in any of the references that each of the pads includes a switch actuatable a number of times to select any one of the vehicles, the particular number of times being dependent upon the particular one of the vehicles to be addressed by the pad.
- e. No disclosure is provided in any of the references of memory means in the central station for remembering each of the vehicles addressed at any instant and the pad addressing the vehicle.
- f. None of the references discloses means in the central station for preventing each of the pads from addressing one of the vehicles already being addressed by another one of the pads.
- g. There is no disclosure in any of the references that the preventing means in the central station is operable to prevent each pad from illuminating light illuminable members individual to vehicles being addressed by the other pads.

Claim 158 is also allowable over the combination of Rosenhagen, Stern and Yavetz for a number of important reasons. These include the following:

- a. None of the references discloses a central station.

b. None of the references discloses that each of a plurality of pads has a first member actuatable a sequential number of times to address any one of the vehicles dependent upon the number of actuations.

c. No disclosure is provided in the central station of means in the central station for interrogating the pads.

d. There is no disclosure in any of the references of means in the central station for remembering each pad and the vehicle selected by the pad and for providing for the transmittal of such information to the pad.

e. None of the references discloses means responsive in the pads to the remembered information transmitted to the pads from the central station for skipping in each pad the binary indications of vehicles already being addressed by others of the pads when the first member in the pad is actuated the sequential number of times.

f. There is no disclosure in any of the references of means responsive in each pad to the remembered information transmitted to the pad from the central station for skipping the light illuminating members indicating the vehicles already being addressed by others of the pads when the first member in the pad is actuated the sequential number of times to address one of the vehicles.

7. Claims 111 - 113 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Yavetz in view of Stern and Rosenhagen. Claims 111 - 113 are allowable over each of Yavetz, Stern and Rosenhagen for a number of the same reasons.

This prevents Yavetz, Stern and Rosenhagen from being combined to reject claims

111 - 113.

Claim 111 is allowable over the combination of Yavetz, Stern and Rosenhagen for a number of reasons including the following:

- a. None of the references discloses a central station.
- b. There is no disclosure in any of the references of first means in the central station for interrogating the pads to determine the address and the commands provided by the pads.
- c. None of the references discloses second means responsive in the central station to the interrogation provided by the first means in the central station concerning the address and commands from the pads for receiving the address and commands from the pads and for transmitting the address and the commands from the pads to the vehicles in the plurality.
- d. No disclosure is provided in any of the references of third means responsive in the central station to the connection of an additional pad, other than the pads in the plurality, to the central station and to the reception by the central station of the address and commands from such additional pad for initially transmitting such address and commands from such additional pad on a priority basis relative to the transmission of the address and commands from the pads in the plurality.

Since claim 112 is dependent from claim 111, it is allowable over the combination of Yavetz, Stern and Rosenhagen for the same reasons as claim 111. Claim 112 is also allowable over this combination of references because of the failure of any of the references to transmit to the vehicles at each instant only the addresses and commands from the pads which are providing changes in addresses or commands at that instant.

Claim 113 is allowable over the combination of Yavetz, Stern and Rosenhagen for the same reasons as claim 111 because it is dependent from claim 111. Claim 113 is additionally allowable over this combination of references because none of the references discloses that the central station transmits the address and commands from the additional pad to the vehicles in the plurality only when the central station has completed the transmission to the vehicles in the plurality of the address and commands of the pads in the plurality whose address and commands the central station has been transmitting to the vehicles at the time that the central station receives the address and commands from the additional pad.

8. Applicant notes and appreciates the indication by the Examiner that claims 1 - 13, 18 - 22, 30, 32 - 35, 40 - 42, 57 - 60, 63 - 80, 82 - 91, 96 - 99, 104 - 106, 124, 125, 148, 149, 152, 153 and 162 - 164 have been allowed. Applicant also notes and appreciates the indication by the Examiner that claims 101, 102 and 128 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening


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claims. Applicant has accordingly rewritten claims 101, 102 and 128 in independent form in accordance with the suggestions of the Examiner and respectfully requests allowance of these claims.

9. Reconsideration and allowance of the application are respectfully requested.

Respectfully submitted,



Ellsworth R. Roston
Registration No. 16,310
Attorney for Applicant

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FULWIDER PATTON LEE & UTECHT, LLP
10877 Wilshire Boulevard, Tenth Floor
Los Angeles, CA 90024
TEL: (310) 824-5555
FAX: (310) 824-9696